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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/699,405	10/31/2003	Gary Edward Trewiler	125181	2111

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EXAMINER

KOEHLER, ROBERT R

ART UNIT

PAPER NUMBER

1775

DATE MAILED: 05/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/699,405	Applicant(s) TREWILER	
	Examiner Robert R. Koehler	Art Unit 1775	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-26 is/are allowed.
- 6) ☐ Claim(s) ____ is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☒ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

RRK.
5-3-05

Attachment(s)

- | | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>10312003; 02242005</u> | 6) <input type="checkbox"/> Other: ____ |

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DETAILED ACTION

Oath/Declaration

The oath or declaration is defective. A new oath or declaration in compliance with 37 CFR 1.67(a) identifying this application by application number and filing date is required. See MPEP §§ 602.01 and 602.02.

The oath or declaration is defective because: Applicant's "Post Office Address" on page 2 of the Declaration is not complete. The state name (Ohio) is missing.

Specification

The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: In claim 17, the subject matter of "the interlayer metal is based on at least one element selected from the group consisting of Cr, Ni, Pd and their alloys and mixtures" cannot be found in the specification. See paragraph [0040] on pages 12 and 13.

Allowable Subject Matter

Claims 1 to 26 are allowed.

The following is a statement of reasons for the indication of allowable subject matter: The prior art search has not produced any references which teach, suggest, or disclose applicant's claimed fusion welding method for welding a first member with a second member wherein: **(a)** the first member is made of a first metal free of at least one identified element that can form a continuous layer of a brittle intermetallic compound; **(b)** the second member is made of a second metal that includes at least one identified element that can form a continuous layer of a brittle intermetallic compound; and **(c)** the welding method utilizes an appropriate amount of energy for a particular time period which heats the interface surfaces of the first and second members to a fusion welding temperature such that a continuous layer of a brittle intermetallic compound does not form at the interface surfaces. In order to control the extent of

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formation of any brittle intermetallic compounds at the interface surfaces, applicant's method claims require that the fusion welding temperature is generated for a time selected to be sufficient to heat the interface surfaces and achieve fusion welding and to be less than the time that enables formation of the continuous layer of a brittle intermetallic compound at the interface surfaces. Also, the prior art search has not produced any references which teach, suggest, or disclose applicant's claims to a welded article comprising a first member made of a first metal free of at least one identified element that can form a continuous layer of a brittle intermetallic compound, a second member made of a second metal that includes at least one identified element that can form a continuous layer of a brittle intermetallic compound, and a fusion-welded region of the first and second members that is free of a continuous layer of a brittle intermetallic compound. The Examiner believes that U.S. Patent No. 6,384,365 B1 (Seth, et al.) is relevant prior art because the patent teaches a welding method suitable for turbine blades which allows ease of bonding of dissimilar materials. In the process of welding two opposing surfaces, an apparatus is operated to generate a local, momentary high temperature discharge of up to 1300°C and heating time less than 5 minutes. See line 43 in column 4 to line 13 in column 5. Seth, et al. does not teach or reasonably suggest any control over the metallurgical microstructure(s) and metallurgical compositions of the members to be welded. The patent does not teach or reasonably suggest any benefit for preventing the occurrence of a continuous layer of any brittle intermetallic compound in the weld region by controlling the fusion welding temperature and heating time during the welding operation. Also, the patent does not teach or reasonably suggest a welded article constructed of at least two members wherein the metallurgical compositions of both welded members are strictly controlled so that the fusion weld region is free of any continuous layer of a brittle intermetallic compound.

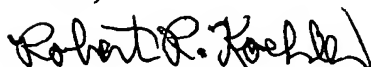
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Conclusion

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Robert Koehler whose telephone number is **(571) 272-1536**. The Examiner can normally be reached on Tuesday to Friday from 9:30 AM to 7:00 PM. The Examiner can also be reached on alternate Mondays.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Deborah Jones, can be reached on **(571) 272-1535**. The fax phone number for the organization where this application or proceeding is assigned is **703-872-9306**.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at **866-217-9197** (toll-free).



**ROBERT R. KOEHLER
PRIMARY EXAMINER**

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May 3, 2005